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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/800,063 | 03/12/2004 | Johannes Wesselmann | SHEE 2 00023 | 8437 |
| 27885 | 7590 | 08/09/2005 | EXAMINER | |
| FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114 | | | KRECK, JOHN J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3673 | |
| DATE MAILED: 08/09/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,063

Applicant(s)

WESSELMANN, JOHANNES

Examiner

John Kreck

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3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment dated 5/18/05 had been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, and 3-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Stolarczyk (U.S. Patent number 5,087,099).

Stolarczyk teaches a face control system wherein the communication system comprises a first face sided radio transmission device (192, see col. 7, lines 18-26 and col. 8, lines 24-32) and a second face master control sided radio transmission device (230), the radio transmission devices each having receiver and transmitter modules to carry out wireless and cable free bi-directional data transmission in the end region of the face as called for in claim 1.

With regards to claim 3; "the communication device in the face" is interpreted as "the first face sided radio transmission device"; which is shown by Stolarczyk; and disclosed as being on multiple shields; thus is deemed to be spaced as called for in claim 3.

Stolarczyk teaches the mining machine having a radio transmission system (e.g. figure 4) as called for in claim 4.

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Stolarczyk teaches the control device as called for in claim 5.

Regarding independent claim 6:

Stolarczyk teaches a face support control system comprising a communication system providing wireless and cable free radio communication as called for in claim 6.

Stolarczyk teaches a first radio (e.g. 192) as called for in claim 7.

Stolarczyk teaches a second radio (230) as called for in claim 8.

Stolarczyk teaches a second communication device (e.g. 192: see col. 7, lines 24-26) as called for in claim 9.

Stolarczyk teaches radio communication as called for in claim 10.

Stolarczyk teaches the radio transmission station as called for in claim 11.

Stolarczyk teaches a second communication device as called for in claim 12.

Regarding independent claim 13:

Stolarczyk teaches the mining system comprising a mining machine (e.g 124-130, figure 4); a plurality of support shields (96); a plurality of control devices (258, see col 8, lines 23-51) for controlling the shields; at least one communication device (192) in communication with at least one of the plurality of control devices; a face master control (e.g. 220,224); and a wireless and cable free radio based communication system (e.g. 236 and 248) providing radio communication between the communication device and the face master control as called for in claim 13.

Stolarczyk teaches the radio transmission station (192—col. 7, line 24 or 125—col. 6, lines 32-44) providing communication between the mining machine and the communication device as called for in claim 14.

Stolarczyk teaches first and second communication devices as called for in claim 15.

Stolarczyk teaches the radio communication between the first and second devices as called for in claim 16.

Stolarczyk teaches the radio transmission station providing communication between the mining machine and at least one of the first and second communication devices as called for in claim 17.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stolarczyk.

Stolarczyk fails to explicitly disclose the transmission device on the face edge. Absent any showing of unexpected results, the precise placement of the device is deemed to be obvious to one of ordinary skill in the art.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stolarczyk in view of Merriman (U.S. Patent number 5,029,943).

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Stolarczyk fails to teach the transmission station (i.e. the mining machine radio) provides communication between both the first and second communication devices (e.g. two distinct shield radios) and the mining machine

Merriman teaches a radio (col. 2, line 30) transmission station for communicating between each shield radio and the mining machine. This provides the advantage of allowing the location of the mining machine to be determined (col. 2, line 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Stolarczyk system to have the transmission station provides communication between the first and second communication devices and the mining machine as called for in claim 18; in order to facilitate locating the mining machine along the face.

6. Applicant's arguments filed 5/18/05 have been fully considered but they are not persuasive. Applicant has argued that the primary reference fails to teach a wireless and cable-free system and also fails to teach the bi-directional data transmission.

With regards to the term "wireless" see the title of the Stolarczyk patent.

With regards to the term "cable-free"; see, e.g. col. 5, lines 37-42 of Stolarczyk:

"electrical conductor 98 which can be for example, a utility conductor such as an AC power cable, a wire rope, a telephone or other communication cable, a water pipe or a conveyor belt structure."

Although Stolarczyk discloses a cable, the reference clearly teaches cable-free transmission (i.e. using a pipe or conveyor structure).

With regards to the "bi-directional" data transmission; see col. 6, lines 32-43:

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"FIG. 4 shows the longwall shield 96 in more detail. A horizontal hydraulic ram 136 mechanically connects the longwall shield 96 to a pan line 138. A vertical hydraulic ram 140 is mechanically connected between a shield base 142 and a shield roof support 146. A roof support automation control unit (RSACU) 148 is attached to the shield 96. The RSACU 148 and the MACU 125 comprise electronic components equivalent to those contained in the central receiver unit 102. Specifically, a microcomputer, a transceiver, a minimal phase shift key modem, an input/output port and an antenna as is shown in more detail in FIG. 8." (emphasis added)

A transceiver is used for b-directional data transmission. See also the abstract:

"data can be communicated between a remote location and a surface area by utilizing a system of repeaters inductively coupled to a utility conductor. Use of the repeater system permits operation of mining machines from a surface computer"

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is 571-272-7042. The examiner can normally be reached on M-F 5:30 am - 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on 571-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Kreck
Primary Examiner
Art Unit 3673

JJK